

On 6 occasions throughout January and February 1980, I saw Prairie Falcons apparently hunting close to actively hunting Harriers. On these occasions, I saw a Harrier hunting over open grassland and cultivated grainfields in their typical low flying manner, while a Prairie Falcon flew approximately 30–50m above and 50–100m behind. As the Harrier coursed across the fields, the accompanying falcon stooped on rising birds which were flushed by the hawk. Although I saw neither species take prey, the association appeared deliberate. Bourne (1960) and Watson (1977:92) observed similar relationships between the Hen Harrier (*C. c. cyaneus*) and Merlin (*F. columbarius*).

These incidents may be an example of a behavioral symbiosis. Prairie Falcons often capture prey that flushes out in front of them (Enderson 1964). However, potential prey in good cover is often hesitant to flush due to the falcon's flying ability. Conversely, the Harrier's low flight pattern and long legs enable it to most effectively capture prey on, or very close to, the ground (Watson 1977:87). For avian prey, the apparent response to a Harrier overhead would thus be to flush ahead of the hawk. It is apparent then, that a Prairie Falcon could facilitate its own hunting by utilizing a hunting Harrier as a flusher. By hunting in association with a Harrier, a Prairie Falcon may actually increase its encounter rate with prey items. The benefit which the Harrier receives from this relationship is less apparent. Perhaps the hawk benefits by taking birds which are hesitant to flush in the presence of the falcon.

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FOOD OF THE SPOTTED OWL IN UTAH

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In this paper we report a sample of prey of the Mexican Spotted Owl (*Strix occidentalis lucida*) from southern Utah. Food habits of this species are poorly known compared to many other North American owls (Earhart and Johnson 1970). Diet of the Mexican race is least well known. A few casual records are available from Arizona and New Mexico (Huey 1932, Ligon 1926) but only seven prey individuals were previously reported for Utah (Kertell 1977). Forsman (1976) and Barrows (1980) have reported the only comprehensive analysis of Spotted Owl foods from Oregon (*S. o. occidentalis*) and California (*S. o. caurina*), respectively. Reports of other, mostly very small collections of prey, were reviewed by Barrows (1980) and Zarn (1974).

The Spotted Owl is listed as a rare permanent resident in Utah (Behle and Perry 1975) and is found in habitats very different than the dense, old growth forests occupied by other races. Kertell (1977) felt that cool retreats were necessary for roosting and nesting in the hot summers of southern Utah; these are found in narrow, steep-walled canyons.

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On 20 August 1980 we were recording Monk Parakeet (*Myiopsitta monachus*) calls in front of a solitary nest near a colony of about 20 nests located close to a more densely wooded area. We chose this nest in order to record single voices of *M. monachus* and then to evaluate their relationship with parakeet behaviour. At 18:10 hrs, while the sun was setting behind the hills, a pair of *Spizapteryx* arrived and began making vocal displays which we recorded for half an hour using play-backs. The male came toward us, repeated its vocal display and flew toward the nesting colony of *M. monachus*. When we approached the colony, doing play-backs of his voice, he started emitting alarm calls. Despite the fact that it was getting dark, we could see him clearly emerging from a parakeet nest continuously emitting alarm calls. Simultaneously we could also hear the alarm calls of the parakeets. After perching for a few minutes about 10 m. from us the falconet flew towards another parakeet nest and entered it. To our great surprise, 4 parakeets left this nest, flew around it emitting alarm calls only to re-enter it a few minutes later. In the same nest were now the falconet and 4 parakeets together.

We repeated the play-back of the falconet's voice and the same procedure occurred again, namely, the male falconet left the nest, emitting a few high pitched alarm calls, perched only 6 m. from us, and then entered a third parakeet nest, out of which flew 6 parakeets, circled excitedly around the nest and entered it later with the falconet still inside.

We did not use the play-back again and all birds remained where they were. It was obvious that the falconet was to spend the night in a nest together with the 6 parakeets. It is worthwhile to note that due to the play-back work to which we submitted this individual we were able to make him leave and enter three different nests, all of them inhabited by parakeets. This episode lasted about 45 min. We left the area at about 18:55. The female falconet was nowhere to be seen, and presumably left the area while we concentrated on our work with the male.

We feel that this behavior of *S. circumcinctus* deserves more studies and detailed data, but we also believe that our observation of this particular individual should not be considered rare. On another occasion, while Straneck was recording voices of *M. monachus* in exactly the same place, he saw another falconet flying towards the colony. As long as the falconet was flying, the parakeets in the colony were excited, emitting alarm calls. However, as soon as the falconet perched on a tree in the middle of the colony, the parakeets quieted down and normal activity resumed. Only when he took wing, and showed the typical raptor silhouette did the colony become excited again.

The behavior of this falconet around bulky stick nests with hole-type entrances is of particular interest in light of the fact that the African Pigmy Falcon (*P. semitorquatus*) nests and roosts in the nests of weaver finches (Ploceidae) (Maclean 1970). Weaver finch nests that are particularly used by the falcons are those of the Sociable Weaver (*Philetarius socius*) and have the general configuration of a large Monk Parakeet colonial nest. While these two falcons may not be particularly related they may prove to have shown a similar evolution of behavioral traits perhaps in response to the environment.

For this work we used a Uher 4000 report IC recorder and Dan Gibson P 200 parabolic microphone with BASF DP 26 tapes. All recordings are in the possession of Straneck.

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A POSSIBLE HUNTING RELATIONSHIP BETWEEN TWO RAPTOR SPECIES

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The high plains of eastern New Mexico provide a wintering area for numerous raptors, including the abundant Northern Harrier (*Circus cyaneus*) and the less abundant but conspicuous Prairie Falcon (*Falco mexicanus*). While studying the Lesser Prairie Chicken (*Tympanuchus pallidicinctus*) in Roosevelt and Lea Counties, New Mexico, a possible relationship between these 2 raptor species was noted.